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From: Shore, Berry

Sent: Tue 8/9/2016 12:48:15 PM

Subject: POFA/PFOS Clips

Chemicals Found In Westhampton Area Well Water Spark Concern

August 5, 2016, 7:21 PM

CBS Channel 2 - NY

WESTHAMPTON BEACH, N.Y. (CBSNewYork) — Concerns are mounting about what is in the water after chemicals were found in water wells in Suffolk County.

The wells are located near Francis S. Gabreski Airport in Westhampton Beach, and families with private drinking wells may be at risk, CBS2's Jennifer McLogan reported.

In Westhampton and Westhampton Beach, residents in homes that rely on private water wells have been warned to drink bottled water – and to have their well water supply tested right away.

"They said that if you were concerned of contamination to please call," a woman said.

"I've called up the water department, and say, 'What's this thing about the water?" said Pete Van Bladal.

Van Bladal lives in the zone, south of Gabreski Airport and east to the Quogue border. A total of 100 families may be at risk.

[&]quot;Really not a need for alarm or panic," said environmental toxicologist Amy Juchatz.

[&]quot;That health advisory is set with a large cushion of protection."

The U.S. Environmental Protection Agency, doing routine monitoring of wells in three years near the Air National Guard runways, discovered low-level contamination of two chemicals — perfluorooctane sulfonate and perfluorooctanoic acid – linked to spraying foam in training exercises.

"The foam that's used by firefighters to suppress certain kinds of fires, and that is what has gotten into this groundwater and drinking water," said Suffolk County Health Commissioner Dr. James Tomarken.

Tomarken said the county is being proactive to preempt any possible risks to pregnant women, those who breastfeed, and babies.

Joshua and Malissa Young were notified and took action.

"The water tested well," Joshua Young said. "We still have a little water purifier on there."

But fears lingered.

"Obviously, this makes me very concerned," Malissa Young said. "We have three children. One has two autoimmune diseases. I am passionate about our environment."

Who will pay? The state and county want the military to pony up the nearly \$2,000 per home it would cost to move each family onto the public water supply.

Remediation advisories are expected within a week. Until then, bottled water will be provided for free.

Researchers find unsafe levels of industrial chemicals in drinking water of 6 million Americans

By Brady Dennis

August 9 at 8:00 AM

Washington Post

A drinking water well structure at Versluis Park in Plainfield Township, Mich. Utilities serving the area recently reported elevated levels of two potentially toxic industrial chemicals in both raw and treated water. (Garret Ellison/The Grand Rapids Press via AP)

Drinking water supplies serving more than six million Americans contain unsafe levels of a widely used class of industrial chemicals linked to potentially serious health problems, according to a new study from Harvard University researchers.

The chemicals — known as polyfluoroalkyl and perfluoroalkyl substances, or PFASs — have been used for decades in a range of industrial and commercial products, including non-stick coatings on pans, food wrappers, water-repellent clothing and firefighting foam. Long-term exposure has been linked to increased risks of kidney cancer, thyroid problems, high cholesterol and hormone disruption, among other issues.

"Virtually all Americans are exposed to these compounds," said Xindi Hu, the study's lead author. "They never break down. Once they are released into the environment, they are there."

As part of the study, which was published Tuesday in Environmental Science & Technology Letters, the researchers examined concentrations of six types of PFAS chemicals in drinking water supplies around the country. The data came from more than 36,000 samples collected by the Environmental Protection Agency between 2013 and 2015.

They also looked at sites where the chemicals are commonly found — industrial plants

that use them in manufacturing, military bases and civilian airports where fire-fighting foam is used and wastewater treatment plants.

Using data from the EPA, researchers mapped areas of the country where high levels of polyfluoroalkyl and perfluoroalkyl substances (PFASs) have surfaced in drinking water supplies. (Courtesy Xindi Hu)

What they found: 194 of 4,864 water supplies across nearly three dozen states had detectable levels of the chemicals. Sixty-six of those water supplies, serving about six million people, had at least one sample that exceeded the EPA's recommended safety limit of 70 parts per trillion for two types of chemicals — perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA).

"It's a big problem in a lot of communities," said Richard Clapp, professor emeritus at Boston University's school of public health. "It's happening in a lot of places."

From Decatur, Ala., to Merrimack, N.H., residents have been wrestling with high levels of the potentially harmful chemicals, and public officials have been scrambling to figure out how to prevent them from contaminating drinking water supplies.

The federal government does not currently regulate PFAS chemicals. But they are on the EPA's list of "unregulated contaminants" that the agency monitors, with the goal of restricting those that most endanger public health. Partly because the rules that it must follow are complicated and contentious, officials have failed to successfully regulate any new contaminant in two decades.

Only once since the 1990s has the EPA come close to imposing a new standard — for perchlorate, a chemical that sometimes occurs naturally but also is found in explosives, road flares and rocket fuel. It has turned up in the drinking water of over 16 million people.

Joel Beauvais, who leads the EPA's Office of Water, told the Post earlier this year that the system mandated by Congress demands the agency move deliberately. "It's a rather intensive process to get one of these drinking-water regulations across the finish line," he said.

There are reasons for that, Beauvais said at the time. A substance may occur in only a very small number of drinking-water systems or might occur only in extremely low levels. Before the EPA imposes new limitations on the nation's water utilities, it has to prove that there is a meaningful opportunity to improve public health. "These are very consequential regulations," Beauvais said. "They are consequential from a health perspective. They are consequential from an economic perspective."

[In U.S. drinking water, many chemicals are regulated — but many aren't]

One of the agency's approaches is to issue health advisories that can prompt state and local officials to take action or at least notify residents about contaminants. In May, it issued advisories for PFOS and PFOA, urging utilities around the country to follow more stringent guidelines than the EPA previously had recommended.

In the wake of that advisory, at least one Alabama community declared its tap water unfit to drink and told residents to avoid it until officials could install a temporary, high-powered filter for the water supply. Some communities in New Hampshire received bottled water while authorities considered ways to address high levels of the contaminants in nearby groundwater. A company in upstate New York agreed to install carbon filters in private homes where high levels of the chemicals had been detected.

Clapp said that as evidence has mounted about the potential health risks posed by PFAS compounds and how ubiquitous they are, few people would argue that they should remain unregulated.

"We're definitely overdue," he said. "It's not a question of whether, but rather at what level should they be regulated."

Separately on Tuesday, another Harvard-led study, published in Environmental Health Perspectives, examined the effect of PFAS exposure in about 600 adolescents from the Faroe Islands off the coast of Denmark. Individuals exposed to the substances at a

young age displayed lower-than-expected levels of antibodies to tetanus and diphtheria after being immunized, raising the prospect that the chemical exposure could be reducing the effectiveness of childhood vaccines.

Unsafe levels of toxic chemicals found in drinking water of 33 states: High levels of fluorinated compounds have been linked to cancer, hormone disruption

By Karen Feldscher, Harvard Chan School Communications

August 9, 2016 | Editor's Pick

Harvard Gazette

Levels of a widely used class of industrial chemicals linked with cancer and other health problems — polyfluoroalkyl and perfluoroalkyl substances (PFASs) — exceed federally recommended safety levels in public drinking-water supplies for 6 million people in the United States, according to a new study led by researchers from the Harvard T.H. Chan School of Public Health and the Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS).

The study will be published Aug. 9 in the journal Environmental Science & Technology Letters.

"For many years, chemicals with unknown toxicities, such as PFASs, were allowed to be used and released to the environment, and we now have to face the severe consequences," said lead author Xindi Hu, a doctoral student in the Department of Environmental Health at Harvard Chan School, Environmental Science and Engineering at SEAS, and Graduate School of Arts and Sciences. "In addition, the actual number of people exposed may be even higher than our study found, because government data for levels of these compounds in drinking water is lacking for almost a third of the U.S. population — about 100 million people."

PFASs have been used over the past 60 years in industrial and commercial products ranging from food wrappers to clothing to pots and pans. They have been linked with cancer, hormone disruption, high cholesterol, and obesity. Although several major manufacturers have discontinued the use of some PFASs, the chemicals continue to

persist in people and wildlife. Drinking water is one of the main routes through which people can be exposed.

The researchers looked at concentrations of six types of PFASs in drinking-water supplies, using data from more than 36,000 water samples collected nationwide by the U.S. Environmental Protection Agency (EPA) from 2013 to 2015. They also looked at industrial sites that manufacture or use PFASs; at military fire-training sites and civilian airports where firefighting foam containing PFASs is used; and at wastewater-treatment plants. Discharges from these plants — which are unable to remove PFASs from wastewater by standard treatment methods — could contaminate groundwater. So could the sludge the plants generate, which is frequently used as fertilizer.

The study found that PFASs were detectable at the minimum reporting levels required by the EPA in 194 out of 4,864 water supplies in 33 states across the United States. Drinking water from 13 states accounted for 75 percent of the detections: California, New Jersey, North Carolina, Alabama, Florida, Pennsylvania, Ohio, New York, Georgia, Minnesota, Arizona, Massachusetts, and Illinois, in order of frequency of detection.

Sixty-six of the public water supplies examined, serving 6 million people, had at least one water sample that measured at or above the EPA safety limit of 70 parts per trillion (ng/L) for two types of PFASs, perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). Concentrations ranged as high as 349 ng/L for PFOA (Warminster, Pa.) and 1,800 ng/L for PFOS (Newark, Del.). The highest levels of PFASs were detected in watersheds near industrial sites, military bases, and wastewater-treatment plants.

"These compounds are potent immunotoxicants in children and recent work suggests drinking-water safety levels should be much lower than the provisional guidelines established by EPA," said Elsie Sunderland, senior author of the study and associate professor at both the Harvard Chan School and SEAS.

Other Harvard Chan authors of the study included Philippe Grandjean and Courtney Carignan. Funding for the study came from the Smith Family Foundation and a private donor.

Another Harvard Chan School study, led by Grandjean, an adjunct professor of environmental health, published in Environmental Health Perspectives and released at 8 a.m. today, also suggested negative health impacts of PFAS exposure. That study looked at a group of about 600 adolescents from the Faroe Islands, an island country off the coast of Denmark. Those exposed to PFASs at a young age had lower-than-expected levels of antibodies against diphtheria and tetanus, for which they had been immunized. The findings suggested that PFASs, which are known to interfere with immune function, may be involved in reducing the effectiveness of vaccines in children.

6 million Americans have unsafe levels of toxic chemicals in their drinking water: Harvard researchers analyzed levels of PFASs in over 36,000 water samples.

by Michelle Kuepper

9th August 2016

Research Gate.net/blog

Polyfluoroalkyl and perfluoroalkyl substances (PFASs) are a class of industrial chemicals that repel both oil and water and are used in paints and fire fighting foam among other applications. We spoke with Xindi Hu from the Department of Environmental Health at Harvard Chan School, to find out what health impacts these chemical compounds could be having, and how they are entering waterways. Hu is the author of a study published in Environmental Science & Technology Letters today.

ResearchGate: What led you to examine PFAS levels in drinking water?

Xindi Hu: Virtually all Americans are exposed to PFAS, and drinking water can be an important source of exposure. Exposure to PFASs have been linked to a wide range of adverse health effects including kidney cancer, elevated cholesterol, obesity and endocrine disruption. Previously, industrial sites that manufacture and produce PFASs were identified as important point sources, but to date no nation-wide studies had been done that linked point sources to PFASs in drinking water. The health concerns around PFASs have led the Environmental Protection Agency to add six PFASs to the Unregulated Contaminant Monitoring Rule program. Our study is the first time a national database on PFASs drinking water levels has been made available.

RG: What's the significance of your results?

Hu: We found that six million people are served by public water supplies that measure at or above the Environmental Protection Agency safety limits of two types of PFASs – PFOS and PFOA. Our study has spurred a national interest in discussing safe drinking water. PFASs is an iconic example of how chemicals with unknown toxicities were previously allowed to be used and released in the environment, and we're only now facing the severe consequences. This is also the first national-wide study linking PFASs contamination in drinking water to potential point sources, especially those sources other than the manufacturing facilities.

RG: Is there a way to remove them from drinking water?

Hu: Some PFASs are extremely stable and almost never break down in the environment. Current wastewater treatment processes do not effectively remove them from water. Scientists are now trying to develop ways to remove them from drinking water, but the technology is not ready to be used yet.

RG: Do you know how PFASs have entered drinking water?

Hu: It depends on the ways in which PFASs enter the drinking water. Manufactures and industrial sites could emit PFASs through air, runoff, and solid waste. Since they are not regulated, there is little incentive to treat them before they are released. Firefighting training that takes place on military bases and airports uses PFAS-containing firefighting foams, which is another way PFASs can be released to the environment. Lastly, since PFASs are also used in many consumer products, landfill leachate can be another source of contamination, along with wastewater treatment plants.

RG: Can you provide insights into why these toxic levels of PFASs are more likely to be found in certain states?

Hu: Drinking water from 13 states accounted for 75 percent of the detections, including, in order of frequency of detection: California, New Jersey, North Carolina, Alabama, Florida, Pennsylvania, Ohio, New York, Georgia, Minnesota, Arizona, Massachusetts, and Illinois. We think this is because some states have more point sources, such as industrial sites, military fire training areas, airports and wastewater treatment plants. The local geology and hydrology conditions also affects the transportation of PFASs from the contamination source to groundwater and surface water.

RG: Would you recommend people in these states stop drinking tap water?

Hu: Not necessarily, concerned residents should talk to their local department of health to ask for more information about PFASs in their drinking water. The drinking water in Hoosick Falls, NY, was found to have very high concentrations of PFASs, and residents were advised to stop drinking tap water until the public water supplies were able to reduce PFASs to acceptable levels.

RG: Are PFASs something people outside the US need to worry about too?

Hu: Yes, they are global contaminants. Since the phase-out of long chain PFASs in the US, the manufacture of PFASs shifted to Asian countries such as China. PFASs are extremely stable in the environment, and have the potential to be transported over very long distances.

RG: What are the next steps in this research?

Hu: Currently, data is lacking for about 100 million people in the US who rely on private wells and small public water supplies. Therefore, to better determine the exposure for these populations, more monitoring studies need to be conducted. Meanwhile, environmental engineers are actively developing methods to effectively treat drinking water and remove PFASs from the water supplies. We are also conducting more research into the health effects of drinking contaminated water, and its impact on diseases such as obesity and diabetes.

Millions of Americans are drinking the toxic chemicals that keep grease and coffee at bay

By Ari Phillips

Fusion.net

Aug. 9, 2016

A new study builds on the realization many Americans came to with the recent Flint, Michigan, water crisis: We don't really know what's in our drinking water.

The study, released Tuesday, doesn't look at lead poisoning in water—the cause of the Flint disaster—but industrial chemicals that have been used in everything from food wrappers to the Teflon in pots and pans for over 60 years. Published in the journal Environmental Science & Technology Letters, the analysis found that more than six million Americans may have unsafe levels of these toxic chemicals, known as polyfluoroalkyl and perfluoroalkyl substances (PFASs), in their drinking water.

PFASs, which many domestic manufacturers started to phase out of production around a decade ago, have been linked with cancer, hormone disruption, high cholesterol, immune system weakening, and obesity. Drinking water is one of the main sources of exposure to these chemicals, according to the study, which was undertaken by researchers from Harvard T.H. Chan School of Public Health and the Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS). Food sources, household dust, and air are other common means of exposure.

In analyzing more than 36,000 water samples collected nationwide by the EPA from 2013-2015, the researchers found that six million people had at least one water sample that measured at or above the EPA safety limit of 70 parts per trillion (ng/L) for two types of PFASs, perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA).

According to the study, "widespread use and extreme resistance to degradation have resulted in the ubiquitous presence of these compounds in the environment."

"Many people take clean drinking water for granted. Our study and the Flint water crisis show that sometimes this is not the case."

Cindy Hu, a doctoral student at SEAS and the lead author on the study, told me that communities close to potential contamination sources such as industrial sites, airports, military zones, and wastewater treatment plants are at the highest risk. She said the two areas with the highest PFAS concentrations, Warminster, PA (349 ng/L for PFOA), and Newark, DE (1,800 ng/L for PFOS), were both formerly sites of DuPont factories that manufactured the organic compounds before phasing them out in the early 2000s. She said the compounds that continue to be used today are likely imported from East Asia, where production has increased in recent years.

According to Hu, these chemicals are so useful because they repel both water and oil. Aside from being used in Teflon, they can also be found in disposable coffee cups, pizza boxes, food and candy packaging, and firefighting foams. They are also good at preventing stains, and are common in carpets and clothes.

The most surprising part of the analysis to Hu was that fact that one-third of Americans rely on drinking water sources that are not well monitored.

"Government data for levels of these compounds in drinking water is lacking for almost a third of the U.S. population."

"The actual number of people exposed may be even higher than our study found, because government data for levels of these compounds in drinking water is lacking for almost a third of the U.S. population—about 100 million people," she said.

Hu hopes the study will help facilitate more research into the issue and help the EPA better address the problem of existing chemical contamination.

"Many people take clean drinking water for granted. Our study and the Flint water crisis show that sometimes this is not the case," she said. "PFAS pollution is an emerging and complicated science problem as there are uncertainties about how these chemicals behave and more research is needed."

In the study, researchers geo-coded PFAS sites likely to have used the chemicals for fire suppression as well as wastewater treatment plants with municipal water systems, watersheds, and populated areas. They used this data to determine the frequency and concentration of these hazardous chemicals in public water supplies.

Hu said the EPA and state governments are already conducting studies in areas with high levels of PFASs, such as West Virginia and Hoosick Falls, NY.

After studying the chemicals for years, in May the EPA established a new health advisory safety limit of 70 parts per trillion for PFOA and PFOS pollution, a significantly lower concentration than the one the agency set in 2009. According to The Intercept, the old levels were based on the assumption that people were only drinking the contaminants sporadically, while the new standards assume a lifetime of exposure.

The EPA is currently evaluating PFOA and PFOS as drinking water contaminants in accordance with the process required by the Safe Drinking Water Act and considering any future water regulations.

According to the EPA's most recent data on PFOA and PFOS contaminants, released in January, 14 drinking water systems around the country reported levels of PFOA that exceed the new federal threshold, while 40 reported PFOS above the new cutoff. A representative from the EPA told me that scientists have found PFOA and PFOS in the blood of nearly all the people they tested, but these studies show that the levels of PFOA and PFOS in blood have been decreasing.

The SEAS study found that concentrations of six types of PFASs, including PFOA and PFOS, were detectable at the minimum reporting levels required by the EPA in 194 out of 4,864 water supplies in 33 states across the country. Drinking water from 13 states accounted for 75% of the detections. These states, in order of frequency, are California,

New Jersey, North Carolina, Alabama, Florida, Pennsylvania, Ohio, New York, Georgia, Minnesota, Arizona, Massachusetts, and Illinois.

According to Arlene Blum, executive director of the Green Science Policy Institute, the best way for communities to address the risk of PFAS contamination is to install water filtration systems. She also said the military and airports should move away from highly fluorinated chemicals for firefighting.

"This is a first step to greatly reduce the new pollution and then the contaminated water sources need to be cleaned up or remediated," she said.

An environmental emergency broke out in Hoosick Falls, NY, late last year when PFOA contamination was deemed to be at hazardous levels in the drinking water. A new filter system was eventually installed and the chemical was removed from the municipal water supply. The source of the PFOA was linked to a nearby factory, the Saint-Gobain Performance Plastics plant, where the chemical was once used in making Teflon products. The plant has since been declared a state Superfund site.

The elevated PFOA levels were originally found in the water system in 2014 by a village trustee, Michael Hickey, whose father died of cancer. According to the Albany Times Union, Hickey sent water samples to a Canadian lab that reported levels of PFOA that the EPA later said are not safe for human consumption.

When New York governor Andrew Cuomo visited the town in March he said if his kids were drinking the water, he'd be frightened.

"The hyperbole, the confusion, the shifting facts, would frighten me," he said, adding, "that's why we've worked very hard to say we're doing everything we can do."

Cumberland, Rhode Island is still investigating how the chemical PFOA made it into one of its drinking water systems.

By Ambar Espinoza, Public Radio

Aug 5, 2016

Vermont Public Radio

Cumberland, Rhode Island popped up on a list of cities and towns that have unsafe levels of the chemical perfluorooctanoic acid, or PFOA. It's used to make Teflon. It turns out those levels have dropped significantly in the town over the past year.

Now they're within a safe threshold.

And that's good news. The toxic chemical is linked to cancer, thyroid diseases and complications during pregnancy. Rhode Island Public Radio environmental reporter Ambar Espinoza has more on what we know and don't know about how this chemical got into Cumberland's drinking water.

Every few years, the Environmental Protection Agency asks public water systems across the country to test their drinking water supplies for 30 unregulated chemicals.

"It's part of EPA's process to try to figure out what ought to be regulated in drinking water in the future," said June Swallow, chief of the Center for Drinking Water Quality at the Rhode Island Department of Health. "And that consists of evaluating health risks of a contaminant and also evaluating whether that contaminant occurs in drinking water at levels of concern in the country."

Last year, in the most recent round of testing in Rhode Island, the chemical PFOA showed up in one water sample from the Cumberland Water Department, which serves more than 22,500 people.

At that time, the EPA's health advisory limit for PFOA was 400 parts per trillion. Cumberland's water sample detected PFOA at 81 ppt.

But, the health department still asked Cumberland to monitor that particular water system by sampling it every quarter, even though as far as both offices knew at the time, the levels fell well below the advisory level. Water Superintendent Chris Champi agreed to the quarterly sampling.

"We wanted to take a proactive approach to see a) what the source of PFOA was in the water and b) create a baseline for what the actual level is in the water," said Champi.

Fast forward to this May. The EPA revised its advisory level from 400 ppt down to 70 ppt. That's a steep drop, and put Cumberland on the list of towns that exceeded the threshold - barely.

The PFOA levels have dropped since then. They're down to the low 20s. (The first quarterly results detected PFOA at 24 ppt and 25 ppt; the second quarterly results at 21 ppt and 22 ppt.) Those are levels considered unsafe by state standards in Vermont, but well below the new EPA standard.

But where the PFOA is coming from is still a mystery. Champi's team had done repairs on that well system about a week or so before drawing water samples for the EPA survey. They used plumber's tape, also known as Teflon pipe tape. He said that could have contributed to the problem.

"However, we didn't have hits at our other well sites which go through a very similar procedure to what happened at that site during regular maintenance, so I would discount that as being a source [of PFOA]."

Photo: Cumberland Water Superintendent Christopher Champi holds a section of a pipe wrapped in plumber's tape, also known as Teflon pipe tape. It's a thin stretchy film used to seal pipes. Champi's team used it when they were doing repairs at one of their wells, where PFOA, a chemical used to make Teflon, was detected.

So, what could the source be? In Merrimack, New Hampshire, high PFOA levels were traced to nearby factories that have made products with the chemical and to contamination from landfills. Champi said there aren't any similar industries or landfills near the well, but is looking into whether fire departments have put out fires with a foam that has PFOA.

"We're lucky with that [water] source because it only supplies about 9.5 percent of the water for our total system," said Champi. "And as it enters the distribution system it's immediately blended with other water from other sources which all were absent for PFOA."

Champi's right. Cumberland is lucky. Several communities in New York, Vermont and New Hampshire have had to switch to bottled water because PFOA has contaminated their drinking supply.

Johnathan Berard, the Rhode Island director of Clean Water Action, is pleased the health and Cumberland water departments took steps to be proactive about this issue by initiating quarterly sampling and publishing its results in the Consumer Confidence Report mailed out to residents this year.

"It's also refreshing to see a government agency doing the right thing, you know and acting in the best interest of their customers and of Cumberland residents," said Berard.

The Cumberland Water Department will continue to monitor that well. Should PFOA levels go up again, the water superintendent says they'll look into treatment options to remove PFOA or take that well out of service until they figure out the source of the problem.

This report comes from the New England News Collaborative. Eight public media companies coming together to tell the story of a changing region, with support from the Corporation for Public Broadcasting.

PFC Discovery In Colorado Illustrates Breadth Of Contamination

By Peak Johnson

News Feature | August 4, 2016

Water Online

The city of Fountain, CO, is facing a problem when it comes to contamination. It is on a growing list of American communities that are dealing with elevated levels of perfluorinated chemicals (PFCs) in their drinking water.

According to The New York Times, in the last few months, PFC poisoning has plagued communities nationwide, from Hoosick Falls, NY to North Bennington, VT.

"Unlike in many of the other places, the contamination in Fountain and in two nearby communities, Widefield and Security, is not believed to be related to manufacturing," the Times reported. "Rather, the authorities suspect that it was caused by Aqueous Film Forming Foam, a firefighting substance used on military bases nationwide."

The New York Times report went on:

The firefighting agent has been used to extinguish fuel fires since 1970. Aqueous Film Forming Foam was created by 3M at the behest of the Navy, which needed a way to stamp out fires on ships. The foam is laden with PFCs.

In the face of growing health effects, The New York Times reported that the U.S. EPA is considering whether to "regulate the chemicals," which manufacturers have used for decades. In May, the EPA released a new health advisory on two of the best-known perfluorinated chemicals — PFOA and PFOS.

Defense Department officials had originally identified 700 sites of possible

contamination, but that number has risen to at least 2,000, most of them on Air Force bases, said Mark A. Correll, a deputy assistant secretary for environment, safety and infrastructure at the Air Force.

Each of the nine bases that the Air Force has examined so far had higher-thanrecommended levels of PFCs in the local drinking water, The New York Times reported. Four bases identified by the Navy were also found to have contaminated water.

"It's quite possible it will touch every state," said Jennifer Field, a professor at Oregon State University, according to the Times. "Every place has a military base, a commercial airport, an oil refinery, a fuel tank farm."

To read more about PFC contamination visit Water Online's Source Water Contamination Solutions Center.